Remarks/Arguments

With reference to the Office Action mailed November 7, 2006, Applicants offer the following remarks and argument.

Status of the Claims

Claims 1-21 were originally presented for examination. Applicant has canceled claim 5-8, and claim 10, substantially amended the independent claims, and amended the dependent claims to conform them to the independent claims.

The Art of Record

The primary reference, United States Patent United States Patent 6,901,515 to Muratani et al. for Code Generating Method And Unit Thereof, Code Detecting Method And Unit Thereof, And Watermark Embedding Unit And Watermark Detecting Unit discloses a method and system for digital watermarking. Muratani's disclosed method comprises generating a computer readable code to be embedded in a predetermined content. This is done by calculating a plurality of residues, taking a plurality of integers which are relatively prime to each other, as moduli, with respect to a user identification number of a user who uses the content; generating a plurality of computer readable component codes respectively expressing the residues obtained in the residue calculating step; and concatenating the computer readable component codes generated in the computer readable component code generating step. This generates a computer readable code to be embedded. The residue calculating sections obtain residues which take a plurality of integers as modulus, with respect to a user ID. The plurality of integers are stored in modulus storage sections and are prime to each other. Based on these residues and parameters stored in a coding parameter storage section, component codes constructed by continuous sequences of 1 and 0 using a predetermined number of bits as a unit are respectively generated by component code generating sections. These component codes

are concatenated by a concatenating section, thereby to obtain a code to be embedded, which constructs watermark information.

However, as will be described below, Muratani et al. do not disclose Applicants' claimed invention.

The Office Action of November 7, 2006

<u>35 USC §101 Rejection</u>

Claims 18-21 were rejected as being directed to non-statutory subject matter.

<u>Art Rejections</u>

In the Office Action of November 7, 2006, the claims (claims 1-21) were rejected as anticipated by Muratani et al.

Discussion

The overarching issue presented is that Applicants' amendments impart allowability to the amended claims. The discussion will be based upon Claim 1 because the independent claims have all been amended to carry the same limitations, and all of the dependent claims are dependent on claims carrying limitation parallel to the limitations of claim 1.

Analysis of Original Claim 1. The following analysis is presented showing the art of record applied to claim 1:

> 1) A contents server distributing digital contents via a network in response to an
> acquisition request from outside, said contents server comprising: a contents
> storage part for storing a plurality of digital contents wherein a different digital
> watermark is embedded; and an information adding part for, by reading out a

plurality of said digital contents from said contents storage part, switching and

synthesizing said digital contents for each specific part, adding to said digital

contents information specified by a digital watermark being embedded for each

part of said digital contents.

Claim 1 was rejected as being anticipated by the following extracts from US Patent 6,901,515 to Muratani:

The present invention relates to an electronic watermark unit for embedding watermark information in contents such as audio, music, motion pictures, still images, and the like which are digitized as data, and an electronic watermark detection unit for detecting watermark information from contents having embedded watermark information. (Column 1, lines 19-24)

A content such as an image, movie or audio, as a target content, and a user identification number (which will be hereinafter called a user ID) are inputted to the watermark embedding unit 1 and the code-embedded content thereby obtained is distributed through a distribution route 3, which may include a storage medium which stores the content and may be a communication network. (Column 14, lines 40-46)

Information indicating which non-weak ID is assigned to which user specifying data by the database referring section 28 is stored together in the non-weak database 29. That is, with respect to those non-weak IDS that have already been assigned as user IDS to user specifying data among non-weak IDs stored in the non-weak ID database 29, corresponding user specifying data items are stored, maintaining their correspondences to those non-weak IDs. In this manner, those non-weak IDS that have already been assigned to any user specifying data are not assigned to user specifying data items inputted afterward. Column 28, line 61 – Column 29, line 4

The watermark embedding unit shown in FIG. 6A is comprised of a code generating section 11 for generating a code of a user ID to be embedded, which is watermark information to be embedded, and a code embedding section 12 for embedding the generated code into a target content, thereby to obtain a code-embedded content. Column 14, line 67 – Column 15, line 5

The excerpts at column 1 (lines 19-24) and Column 14 (lines 40-46) are general descriptions of digital watermarking, but are not specific or anticipatory of applicants' claims. The excerpt at Column 28 (line 61) to Column 29 (line 4) describes a method, but not Applicants method, of differentiating between weak and non-weak watermarks. Applicants' unamended claim 1 recites

> a contents storage part for storing a plurality of digital contents wherein a different digital watermark is embedded; and an information adding part for, by reading out a plurality of said digital contents from said contents storage part, switching and synthesizing said digital contents for each specific part, adding to said digital contents information specified by a digital watermark being embedded for each part of said digital contents.

By way of contrast, the disclosure of the primary reference is

> Information indicating which non-weak ID is assigned to which user specifying data by the database referring section 28 is stored together in the non-weak database 29. That is, with respect to those non-weak IDS that have already been assigned as user IDS to user specifying data among non-weak IDs stored in the non-weak ID database 29, corresponding user specifying data items are stored, maintaining their correspondences to those non-weak IDs. In this manner, those non-weak IDS that have already been assigned to any user specifying data are not assigned to user specifying data items inputted afterward.

The excerpt at Column 14 (line 67) to Column 15 (line 5) describes the components of the watermark embedding unit, but not Applicants' specifically claimed components, i.e.,

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> * a contents storage part for storing a plurality of digital contents wherein a different digital watermark is embedded;

> * an information adding part for, by reading out a plurality of said digital contents from said contents storage part,

>> ** switching and synthesizing said digital contents for each specific part,

>> ** adding to said digital contents information specified by a digital watermark being embedded for each part of said digital contents.

Thus, Muratani does not anticipate Applicants' claimed invention.

Analysis of Amended Claim 1.

Claim 1 as amended is representative of the other amended independent claims. Amended claim 1 is reproduced below:

> (1) (Currently Amended) A contents server distributing digital contents via a network in response to an acquisition request from outside, said contents server comprising:

> a contents storage part for storing a plurality of digital contents wherein a different digital watermark is embedded; and

> an information adding part comprising:
> i) a content selector for inputting digital watermark embedded digital contents Ce0 and Ce1, and selectively switching and outputting the digital contents, and
> ii) a pseudo random number generator for controlling said content selector to output a partial set of contents Ce0(n) of contents Ce0 and a partial set of contents Ce1(n) of content Ce1 to generate digital watermark content Cf;
> for ~~, by reading out a plurality of said digital contents from said contents storage part, switching and~~ synthesizing said digital contents for each

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specific ~~part~~ <u>acquisition requester</u>, adding to said digital contents information specified by a digital watermark <u>that is different for each acquisition requester</u> being embedded for each part of said digital contents.

Basis for the new limitations is as shown below:

[0060] As shown in FIG. 4, the fingerprint performing part 14 comprises a contents selector 141 for inputting the digital watermark-embedded contents Ce0 and Ce1, and selectively switches and outputs the digital contents, and a pseudo random number generator 142 as control means of the contents selector 141.

[0061] The contents selector 141 inputs the digital watermark-embedded contents Ce0 meaning the bit information 0 and the digital watermark-embedded contents Ce1 meaning the bit information 1. And it selectively switches and outputs a partial set Ce0(n) of the contents Ce0 and a partial set Ce1(n) of the contents Ce1 in accordance with a pseudo random number sequence generated by the pseudo random number generator 142 to generate the contents Cf with fingerprint made.

[0063] In this manner, the contents selector 141 is controlled employing the pseudo random number sequence generated by the pseudo random number generator 142, so that the bit information is formed with digital watermark-embedded for each partial set Cf(n) of the contents Cf with fingerprint. Employing this bit information, the fingerprint information corresponding to the embedment information m(n) is described in the contents Cf.

Analyzing amended claim 1 element by element,

A contents server distributing digital contents via a network in response to an acquisition request from outside, said contents server comprising:

a contents storage part for storing a plurality of digital contents wherein a different digital watermark is embedded; and

an information adding part <u>comprising:</u>

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i)   a content selector for inputting digital watermark
        embedded digital contents Ce0 and Ce1, and selectively
        switching and outputting the digital contents, and

Muratani neither teaches nor suggests any aspect of a content selector for inputting digital water mark embedded digital contents, and for selective switching and outputting the digital contents. What Muratani discloses is:

Information indicating which non-weak ID is assigned to which user specifying data by the database referring section 28 is stored together in the non-weak database 29. That is, with respect to those non-weak IDS that have already been assigned as user IDS to user specifying data among non-weak IDs stored in the non-weak ID database 29, corresponding user specifying data items are stored, maintaining their correspondences to those non-weak IDs. In this manner, those non-weak IDS that have already been assigned to any user specifying data are not assigned to user specifying data items inputted afterward.
Column 28, line 61 – Column 29, line 4

The watermark embedding unit shown in FIG. 6A is comprised of a code generating section 11 for generating a code of a user ID to be embedded, which is watermark information to be embedded, and a code embedding section 12 for embedding the generated code into a target content, thereby to obtain a code-embedded content.
Column 14, line 67 – Column 15, line 5

ii)   a pseudo random number generator for controlling said
        content selector to output a partial set of contents
        Ce0(n) of contents Ce0 and a partial set of contents
        Ce1(n) of content Ce1 to generate digital watermark
        content Cf;
for synthesizing said digital contents for each specific
acquisition requester,

        Muratani's disclosure of random numbers is first
        presented at Column 2, lines 28-40, and Cox, I. J.,
        Kilian, J., Leighton, T. and Shamoon, T., "Secure
        Spread Spectrum Watermarking for Multimedia", NEC
        Research Institute, Technical Report 95-10, 1995, and

subsequent references to random number sequences for mathematical transforms:

> *"In the method according to the reference [1] described above, watermark information is embedded by performing orthogonal conversion on pixel values, and watermark information is spread and embedded in a frequency domain. Spreading is carried out by changing a plurality of frequency components in the frequency domain, in accordance with a random number sequence. After the spreading, reverse orthogonal conversion is carried out. To detect watermark information, orthogonal conversion is performed on pixel values, and a determination is made on correlative values between values of the frequency components where watermark information is embedded and the random number sequence used for embedding the watermark information."* — Column 2, lines 28-40

adding to said digital contents information specified by a digital watermark <u>that is different for each acquisition requester</u> being embedded for each part of said digital contents.

Moreover, there is no disclosure in Muratani of the newly add claim limitation:

> an information adding part comprising:
> i) a content selector for inputting digital watermark embedded digital contents Ce0 and Ce1, and selectively switching and outputting the digital contents, and
> ii) a pseudo random number generator for controlling said content selector to output a partial set of contents Ce0(n) of contents Ce0 and a partial set of contents Ce1(n) of content Ce1 to generate digital watermark content Cf;
> for synthesizing said digital contents for each specific acquisition requester, adding to said digital contents information specified by a digital watermark that is different for each acquisition requester being embedded for each part of said digital contents.

Independent claims 9, 11, 16, and 18 have been amended to include all of the limitations added to claim 1, and the same discussion applies to these claims. The dependent claims

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are all dependent on one of claims 1, 9, 11, 16, and 18, and the same discussion applies to these claims.

Analysis of the 35 USC §101 Rejection

Claims 18-21 were rejected as being directed to non-statutory subject matter. Applicants have amended 18-21, and now claim the subject matter of claim 18 as

> *"A program product comprising a medium having computer readable code stored thereon for causing a computer to perform the data processing by controlling a computer, ..."*

and is a proper "program product" claim.

Thus applicants' claimed invention, defined by the amended claims, is allowable over Muratani et al.

Conclusion

Based on the above discussion, it is respectfully submitted that the pending claims describe an invention that is properly allowable to the Applicants.

If any issues remain unresolved despite the present amendment, the Examiner is requested to telephone Applicants' Attorney at the telephone number shown below to arrange for a telephonic interview before issuing another Office Action.

Applicants would like to take this opportunity to thank the Examiner for a thorough and competent examination and for courtesies extended to Applicants' Attorney.

Respectfully Submitted

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